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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,193	01/03/2002	Johannes-Gerh Banghard	3286-0163P	9466

30596 7590 01/14/2003

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EXAMINER

FISHMAN, MARINA

ART UNIT PAPER NUMBER

2832

DATE MAILED: 01/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/914,193

Applicant(s)

BANGHARD ET AL.

Examiner

Marina Fishman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

The drawings are objected to because cutaway views of “annular **insulator 4**” should be crosshatched as such [MPEP, 608.02]. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 1 - 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hakamata et al. [US 5763848] in view of Cherry et al. [US 4216360] and Stegmüller [US 4962289].

Hakamata et al. disclose a vacuum circuit interrupter [Figure 5] including:

- a stationary contact tip in flat spiral form [4];
- a moveable contact tip in flat spiral form [5];
- a cylindrical bolt [7];
- an annular insulator [3];
- a metallic separating wall [Figure 5].

Hakamata et al. disclose the instant claimed invention except for: a power current connection of the stationary contact tip in the form of a plate and a membrane disc with concentric corrugations, number of which should be at least 3.

Cherry et al. disclose a low voltage vacuum switch [Figures 1 – 3] having the power current connection of the stationary contact tip in the form of the plate [18a; column 3, lines 8 – 15].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the power current connection of the stationary contact tip in the form of the plate in Hakamata et al., as suggested by Cherry et al., in order to reduce size of the vacuum switch and to facilitate an electrical connection [Column 3, lines 8 – 15].

Stegmüller discloses a switch chamber for a vacuum switch [Figure 4] having a membrane disc with concentric corrugations [24] with a wall thickness  $\leq 1$  mm.

Cherry et al. disclose a low voltage vacuum switch [Figures 1 – 3] having a membrane disc with at least 3 full corrugations.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the membrane disc with concentric corrugations in Hakamata et al., as suggested by Stegmüller and Cherry et al., in order to reduce size of the switch [Column 5, lines 45 – 51].

### ***Response to Arguments***

Applicant's arguments filed on 12/11/02 have been fully considered but they are not persuasive. Each argument will be discussed in detail below:

1. The rejections in the previous office action under 35 USC §112, second paragraph are withdrawn.

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2. Applicant argues that the references failed to teach "a membrane... in the form of a disk that is soldered on one side to the power current connection of the moving contact tip and on the other side via an axially running annular flange to the annular insulator". Stegmüller clearly discloses this structure in Figure 4.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marina Fishman whose telephone number is 703-305-1665. The examiner can normally be reached on 8-5 M-F.

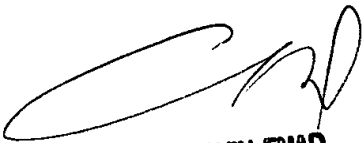
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (703) 308-1782. The fax phone numbers for

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the organization where this application or proceeding is assigned are 703-308-7724 for regular communications and 703-308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1920.

M.F.  
January 6, 2003

  
**ELVIN ENAD**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2800**  
01/10/03

The following symbols should be used to indicate various materials where the material is an important feature of the invention. The use of conventional features is very helpful in making prior art searches.

